oasi.org.uk

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OASI News

The newsletter of Orwell Astronomical Society (Ipswich)

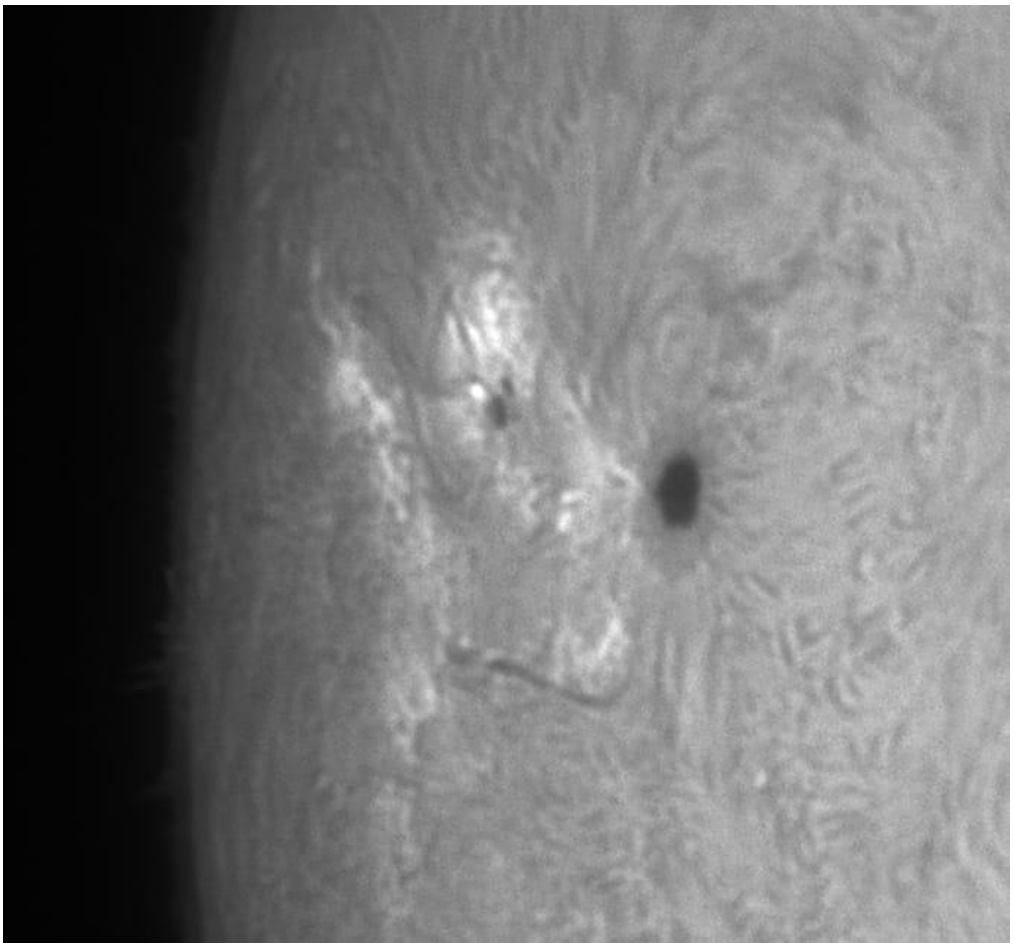


Figure 1Martin Cook: Solar image of prominences in H-Alpha using a Lunt LS60THa/B1200 scope

Contents

Society Notices

Dear Members,

As we approach the Summer Solstice, the sky does not get truly dark. So what does an astronomer do? We look for clouds, Noctilucent clouds! These high level clouds can provide a beautiful spectacle, approximately 60-90 minutes after sunset or before sunrise at this time of the year. Look to the North West after sunset and the North East before sunrise. A smartphone camera is all you need to take some stunning images.

We are still looking for help with our Solar outreach events at Mendlesham on Saturday June 7th and Kirton on Sunday June 15th. If you are able to help out in any way, please let myself or any Committee member know.

Thank you,

Andy Gibbs, Chairman.

Chairman.

Committee 2025

Chairman	Andy Gibbs	Set overall agenda for OASI, Chair committee meetings, Press and publicity
Secretary	Roy Gooding	Outreach meetings (jointly with Chairman), observatory decoration
Treasurer	Paul Whiting	Finance, Supervision of applications for grants. Visits by outside groups, Observatory tours, public appreciation of astronomy, Outreach activities
Committee	James Appleton	Committee meeting minutes, Web site
	Martin Cook	Membership, Tomline refractor maintenance & user testing
	Matt Leeks	Safety & security
	Peter Richards	Lecture meetings
	Mike Whybray	Astronomy Workshops, Child protection officer, Orwell Park School Astronomy Club
	Andy Willshere	Librarian
	Adam Honeybell	Newsletter
	Paul Whiting	OASI @ Newbourne

Committee Meeting

The next Committee Meeting will be the Friday 30th May 2025 on Zoom. All members welcome.

New members

Welcome!

Society Contact details

Website:	https://www.oasi.org.uk
Events:	https://www.oasi.org.uk/Events/Events.php
Email queries:	info@oasi.org.uk
Submissions for Newsletter:	news@oasi.org.uk
Members-only message board:	https://groups.io/g/OASI
Observatory (meeting nights only):	☎ 07960 083714

Social Media

For other astronomy news and astro pictures try our socials:

Facebook:	https://www.facebook.com/groups/445056098989371
YouTube:	https://www.youtube.com/@orwellastronomical425
WhatsApp:	There is a WhatsApp group. Please email to be added.

We'd like to use social media a little more, since it's a more direct and immediate way to interact with members and potential members. Feel free to post pictures, comments or interesting articles. The more it's used, the more other people will be inclined to use it as well.

Articles for OASI News

News, pictures and articles for this newsletter are always welcome.

Please send tables as separate files in one of these formats (Excel, .csv, OpenOffice)

If you don't feel up to writing a major article, perhaps you might write a short note for OASI News along the lines of "This month I have mostly been observing/constructing/mending/reading/etc."

Please send material for the OASI web site and newsletter e.g., observations, notices of events, general interest articles, to news@oasi.org.uk

The CLOSING date is the **15th** day of the month (i.e. 15th June).

The Newsletter archive is at www.oasi.org.uk/NL/NL_form.shtml

Authors, please note that your articles will be publicly available worldwide!

Reproducing articles from OASI News

If you plan to reproduce an article exactly as per OASI News then please contact the Editor – otherwise, as a matter of courtesy, please seek permission from and credit the original source/author. You may not reproduce articles for profit or other commercial purpose.

Meetings and events

We have regular meetings on the 2nd and 4th Monday of the month (usually) at **Newbourne Village Hall**, and every Wednesday at **Orwell Park**. Night sky observing will usually take place when the skies are clear. See website for more events.

Date, Time & Location	Contact	Event
Weekly, every Wednesday, from 20:00, Orwell Park Observatory, Nacton	Martin Cook	Observatory open
Friday 30th May 20:00 Zoom	Roy Gooding	Committee meeting via Zoom. All members are invited to attend.
Saturday 7th June 12:00-17:00 Playing field behind Mendlesham Community Centre	Roy Gooding	Public access event. Solar observing at Mendlesham Village Fete. Booking not necessary.
Monday 9th June 19:30 Newbourne Village Hall	Paul Whiting,	Newbourne meeting - beginners and new members welcome! Observing target for the month: the Sun. 19:30: doors open. 19:45: Astro-news by Paul Whiting, FRAS. NB: if the sky is clear, priority will be given to observing, and Astro-News will be postponed.
Sunday 15th June 09:30-16:00 East Suffolk Wireless Revival	Paul Whiting,	Public access event. Solar observing. Booking not necessary.
Monday 16th June 20:00 Zoom	Paul Whiting,	Pre-recorded talk: What has the James Webb Space Telescope Discovered in its First Year? by Naomi Rowe Gurney. (Zoom login details are provided in an email to members.)
Monday 23rd June 19:30 Newbourne Village Hall	Paul Whiting,	Newbourne meeting - beginners and new members welcome! Observing target for the month: the Sun. 19:30: doors open. 19:45: Sky Notes by Bill Barton, FRAS.

OASI @ Orwell Park

There are regular meetings every Wednesday evening from 8pm. Access is controlled by a gate and a fob. The entrance is gate 2 is on Church Road, What3Words is **tour.fuse.banks**

Access into the School Grounds and Observatory Tower

The route is as follows:

• Enter through gate 2 (gate 1 being the main gate) and park inside as per the attached map.

• Enter the school through the double black doors as indicated on the map. A key fob will be required to open the door.

• Continue straight through the next two sets of double doors.

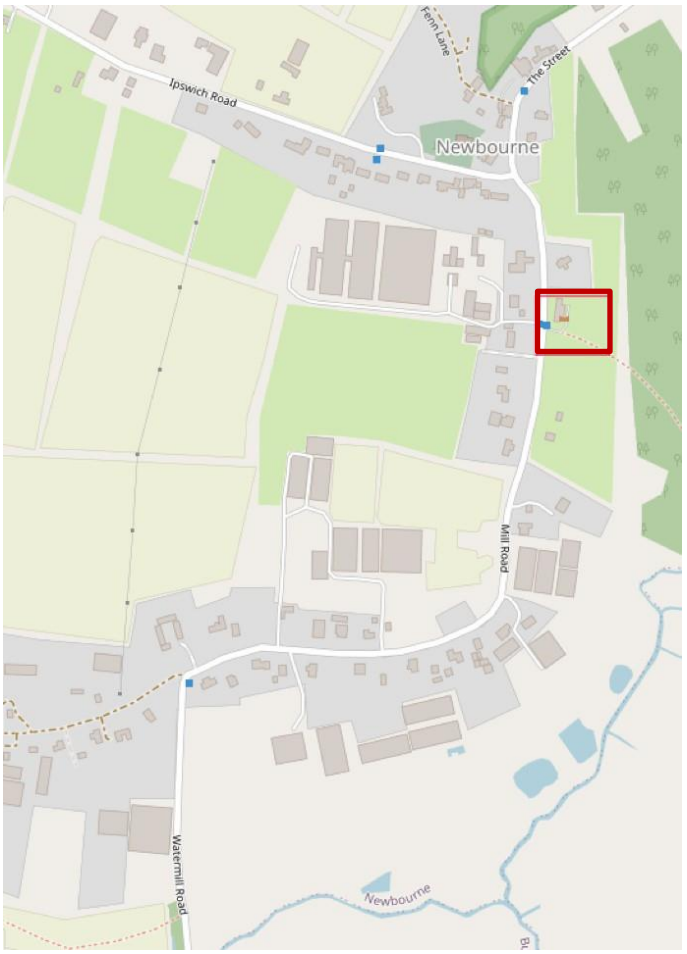
• Turn left at the end of the short corridor then immediately right.

• Pass through the single door and on your left you will find the staircase leading to the observatory.

• On no account must you deviate from this route.

When leaving the observatory use the same route but in reverse. Please keep noise to a minimum as there are staff quarters nearby.

OASI @ Newbourne



newbourne@oasi.org.uk

We meet at Newbourne Village Hall, Mill Lane, IP12 4NP on the 2nd and 4th Mondays from 19:30.

What3Words **scars.atlas.printing**

Visitors are welcome but we do ask you to join the Society after two visits.

http://www.oasi.org.uk/OASI/Membership.php

Newbourne dates for 2025		
June	**09**	**23(S)**
July	**14**	**28**
August	**11**	**25**
September	**08**	**22**
October	**13**	**27**
November	**10**	**24**
December	**08**	**22**

We open up for all meetings at 7:30pm.

Astro News (A) / Sky Notes (S) at 7:45pm followed by any Talks (T), Workshops (W) and occasional Quiz (Q).

# indicates a change to the normal monthly pattern.

Forthcoming Outreach Programmes 2025

All members are welcome to come along and help out at these events – you don't need to be an expert in the subject, just some enthusiasm! Just respond to the email call for help prior to the event.

Please note that not all events are open to the public.

Saturday 7th June 12:00-17:00 Playing field behind Mendlesham Community Centre	Public access event. Solar observing at Mendlesham Village Fete. Booking not necessary.
Sunday 15th June 09:30-16:00 East Suffolk Wireless Revival	Public access event. Solar observing. Booking not necessary.

BAA news, events & webinars

BAA: https://britastro.org/events/future-events

Events correct at time of publication, please go to website for latest information.

4th June 2025	George Alcock Lecture and BAA Meeting	We will be holding a meeting on Wednesday 4th June 2025 from 17:00 to 20:00 at the Institute of Phys
6th June 2025	RAZoom – Observing Magnetic Fields in space, using Micro-wave Radio Observations	Radio Astronomy Section meeting on Zoom, link by request from Paul Hearn [paul@hearn.org.uk]
7th June 2025	Astronomy Back to Basics, Cardiff	
13th June 2025	Solar Eclipse Conference 2025	From 13 to 15 June, the Belgian (Flemish) Society for Astronomy (Vereniging Voor Sterrenkunde or VVS)

The BAA Radio Astronomy Section

The BAA Radio Astronomy Section have been enjoying talks, seminars and tutorials via Zoom and these are available on the BAA YouTube channel https://www.youtube.com/user/britishastronomical/playlists.

The Night Sky in June 2025

Event times are for Orwell Park Observatory at 52.0096°N, 1.2305°E. Times are **GMT** unless otherwise stated.

Sun, Moon and planets

Sources: http://heavens-above.com/PlanetSummary.aspx http://heavens-above.com/moon.aspx

Object	Date	Rise	Set	Mag.	Notes
Sun ☉	1	03:41	20:06		
	30	03:39	20:18		
Moon ☾	1	09:17	00:17		First Quarter : 03 June 03:41 Apogee : 07 June 10:44 Full Moon : 11 June 07:44 Last Quarter : 18 June 19:19 Perigee : 23 June 04:45
	30	09:33	23:00		
Mercury ☿	1	03:48	20:21	-2.0	
	30	05:56	21:36	0.4	
Venus ♀	1	02:11	15:30	-4.2	
	30	01:25	16:23	-4.0	
Mars ♂	1	09:24	00:16	1.3	
	30	09:05	22:47	1.5	
Jupiter ♃	1	04:52	21:17	-1.8	
	30	03:26	19:51	-1.7	
Saturn ♄	1	01:29	13:08	1.1	
	30	23:34	11:21	1.0	
Uranus ♅	1	03:10	18:43	5.8	
	30	01:20	16:58	5.8	
Neptune ♆	1	01:27	13:19	7.9	
	30	23:29	11:26	7.9	

Occultations during June 2025

https://iota-es.de/moon/grazing_descrx101.html and
http://www.lunar-occultations.com/iota/bstar/bstar.htm

Observers are encouraged to download and install the Occult software program [Windows only] to generate predictions for their own particular site coordinates.

Meteor showers during June 2025

No significant meteor showers visible in June

Name	Date of Maximum	Normal Limits	Possible hourly rate	Description

See also https://www.rmg.co.uk/stories/topics/meteor-shower-guide

For radio observation, use reflections from Graves Radar on 143.049MHz or the Brams transmitter in Belgium on 49.97MHz and UK GB3MBA on 50.408MHz https://www.ukmeteorbeacon.org/Home

See also https://www.popastro.com/main_spa1/meteor/radio-meteor-observing-2020/.

Comets

Source : https://heavens-above.com/Comets.aspx.

Comet	Brightness	Date of last reported observation	Angular separation from Sun	Constellation
C/2025 F2 SWAN	8.6	2025-May-02	38°	Lepus
29P Schwassmann-Wachmann 1	13.2	2025-May-28	76°	Leo
C/2021 G2 Atlas	13.7	2025-May-28	155°	Libra
C/2014 UN271 Bernardinelli-Bernstein	14.5	2025-Apr-30	87°	Reticulum
C/2023 A3 Tsuchinshan-ATLAS	15.1	2025-May-27	111°	Vulpecula
49P Arend-Rigaux	15.2	2025-Apr-29	35°	Gemini
C/2022 E2 ATLAS	15.6	2025-May-16	41°	Perseus
C/2024 J3 ATLAS	16	2025-May-25	135°	Sagittarius
P/2010 H2 Vales	16	2025-Apr-30	125°	Virgo

Visible ISS passes >30º max altitude for June 2025

Source: http://heavens-above.com/PassSummary.aspx?satid=25544

Times are **GMT**.
Predictions are approximate (07/04/25) due to craft adjustments. Check the day before.
There are more passes than this, but they're below 30 degrees, so will be harder to spot unless you have good weather and can see the horizon. As with stella/planetary brightness, the more negative the magnitude, the brighter it is.

Date	Brightness	Start			Highest point			End			Pass type
	(mag)	Time	Alt.	Az.	Time	Alt.	Az.	Time	Alt.	Az.	
28 Jun	-3.3	02:28:28	10°	SW	02:31:42	46°	SSE	02:34:56	10°	E	visible
29 Jun	-3.0	01:41:07	19°	SSW	01:42:55	34°	SSE	01:46:00	10°	E	visible
30 Jun	-3.8	02:27:13	10°	WSW	02:30:32	71°	SSE	02:33:53	10°	E	visible

Bill Barton's Radio Broadcast

ICRFM (Ipswich Community Radio) 105.7 MHz at about 08:25 in the morning of the first Wednesday of each month. I aim to cover what there is to see in the sky and then a little bit on something topical. ICRFM is also available to listen to over the Internet and there is a listen again option on their website. http://www.icrfm.com

May 2025 science question answer

If,

S.P.I.N. = 8281

S.H.I.P. = 7225

B.I.N.S. = 6561

What does P.H.O.N. equal.

Clue: All are similar elementarily.

Answer: All are elements. Look at the Periodic table for the atomic numbers.

S.P.I.N. = 16.15.53.7. Add these. = 91. Square this = 8281.

Therefore PHON = 15.1.8.7. = 31. Square this = 961.

Puzzle for June 2025.

1. Elementary particle with negative electric charge and spin of ½.
2. Heisenbergs indeterminary principle.
3. Star Queen nebula.
4. Most dense giant planet.
5. Statistical average of speeds of a group of molecules.
6. Second smallest of the Galilean moons.
7. Collapsed core of a massive supergiant star.
8. In theory it is a vast cloud of icy planetesimals surrounding the Sun, Planets and the Kuiper Belt objects.

Take the first letter of each answer and unscramble the eight letters.

The answer moves in an elementary way very quickly

NASA's SPHEREx Mission

Short article from the library.

Andy Willshere

The NASA SPHEREx spacecraft has a grand title. It stands for Spectro-Photometer for the History of the Universe, Epoch of Reionisation, and Ices Explorer. The idea of this mission is to explore the origins of the universe as well as how galaxies were formed and to gather information about galactic building blocks. What makes the universe tick and to do this it will carry out observations in near-infrared and provide the first all-sky spectroscopic scan (3D map). Astronomers are becoming quite excited by this aspect.

Astronomical spectroscopy is a method of quantifying objects and resources based upon colour. In more detail spectroscopy analyses the spectrum formed from electromagnetic radiation, for example from visible light, ultraviolet, X-ray and infrared, that diffuse from celestial objects such as stars. Examining these spectra can display a plethora of assets, such as chemical composition, mass and density as well as luminosity and distance. Doppler shift in either direction can also be ascertained. Using spectroscopy can also analyse data obtained from active galactic nuclei, galaxies, nebula and planets.

On Tuesday , March 11th at 0810 P.T. the SPHEREx observatory was launched using a Falcon 9 rocket from Space Launch complex 4 East at Vandenberg Space Force Base in California. It then proceeded to orbit for 30 days for scientists to make sure that all was working well. Just for economics, this was the third time the first stage booster had been used. The Falcon 9 is a two-stage reusable rocket designed and manufactured by SpaceX. It has a height of 70m, a diameter of 3.7m and a mass of 549,054 kg. The spacecraft will orbit the Earth in a Sun-synchronous polar orbit at about 650 km. This orbit will keep the telescope away from intense light and heat generated from both the Sun and Earth.

Picture credit : Images taken by the spherex Mission

The prime mission of SPHEREx will last for two years, during which time it will accomplish capturing four all-sky maps, each one taking about six months to produce, with data – capture in 102 colour bands. Data will be released within two months of collection, with images being dissipated occasionally.

The key objectives for the SPHEREx are as follows:

- The production of an all – sky spectral map comprising star and galaxy data from at least 10^8 sources. This will eventually be accessible to scientists throughout the world.
- To research the circumstances of space inflation that occurred in a fraction of a second after the 'big bang'.
- To measure the cumulative luminosity from a multitude of galaxies. This will supplement previous data collections from other studies.
- To hunt through the Milky Way galaxy for basic ingredients for life like water, carbon dioxide and nitrogen. SPHEREx will analyse how differing environments effect these compounds.

The telescope operating within SPHEREx comprises three mirrors which have an overall diameter of 20 cm and a field of view of 11 * 3.5°. All the light collected by the telescope is guided to a duo of focal – plane constructions, each of which accommodates three infrared detectors incorporating colour filters, which will give 102 colours across all six detectors from the 17 colour bands available. Telescope observation will be in one of these colour bands. The telescope will then move slightly to repeat the procedure in a different colour band. This is repeated until all six detectors have been used and every section of the mission requirement has been imaged.

The spacecraft has a total size of 2.6 m tall, 3.2 m in diameter at its widest point and weighs 502 kg. It has three aluminium photon shields, the largest being 1.7 m tall and 3.2 m in diameter. The telescope and detectors which need to operate at approximately minus 350° F are surrounded by these shields. This low temperature reduces the chances that the equipment may glow in the infrared and corrupt observational data. Housed just below the photon shields is the observatories main computer as well as Earth communicating and orientation controlling equipment. These are all powered by a solar panel 2.67 m * 1.02 m that generates 750 watts of power. BAE systems constructed the telescope and spacecraft bus and the system is managed by NASA's Jet Propulsion Laboratory.

This mission is designed to provide a greater understanding of the cosmos, and in our search for life other than on Earth. The universe will be for the first time mapped in exceptional detail, and perhaps answer some of the main astrophysical questions of our time.

References:

SPHEREx Press Kit | NASA Jet Propulsion Laboratory (JPL)

SPHEREx - Wikipedia

SPHEREx – Discovering Our Cosmic Origins

Members Observations

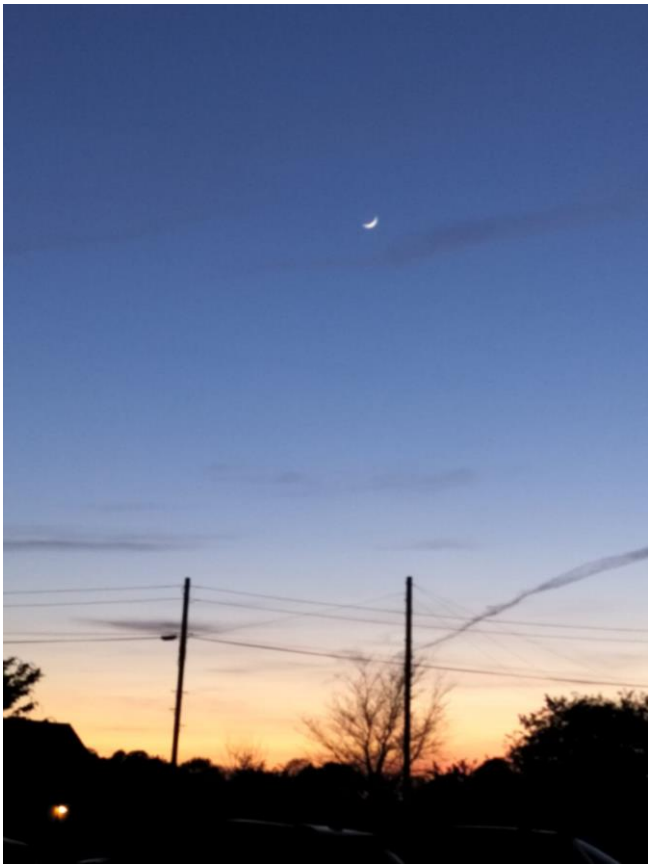


Figure 2 Tracy: Crescent Moon from Sutton - 23rd April 2025

Neil Morley

Today's Seestar image is NGC 2301 within the constellation Monoceros. It was discovered by William Herschel in 1786. A one minute stacked exposure comprising six ten seconds frames. The resulting picture was post processed using the Azure filter within the Motorola G31 Android camera app.